1995, entitled "Apparatus and Methods for Active Programmable Matrix Devices" now issued as U.S. Patent No. 5,849,486, which is a continuation-in-part of Application Serial No. 08/304,657, filed September 9, 1994, entitled, as amended, "Molecular Biological Diagnostic Systems Including Electrodes", now issued as U.S. Patent No. 5,632,957, continued as Serial No. 08/859,644, which is a continuation-in-part of Application Serial No. 08/271,882, filed July 7, 1994, entitled, as amended, "Methods for Electronic Stringency Control for Molecular Biological Analysis and Diagnostics", now issued as U.S. Patent No. 6,017,696, which is a continuation-in-part of Application Serial No. 08/146,504, filed November 1, 1993, entitled, as amended, "Active Programmable Electronic Devices for Molecular Biological Analysis and Diagnostics", now issued as U.S. Patent No. 5,605,662, continued as Application Serial No. 08/725,976, entitled "Methods for Electronic Synthesis of Polymers" now issued as U.S. Patent No. 5,929,208 and Application Serial No. 08/709,358, filed September 6, 1996, entitled "Apparatus and Methods for Active Biological Sample Preparation" now issued as U.S. Patent No. 6,129,828, and is related to Application Serial No. 08/846,876, filed May 1, 1997, entitled "Scanning Optical Detection System" now issued as U.S. Patent No. 6,309,601, all incorporated herein by reference as if fully set forth herein.--

Cont.

Please replace the sentence beginning on page 13, line 29 with the following:

--Figs. 5A, 5B, and 5C show perspective views of the bottom and top and via (in top view), respectively, of a flip-chip system.--

Please replace the sentence beginning on page 14, line 1 with the following:

--Fig. 6A is a cross-sectional view of a flip-chip system showing an inlet port and sample chamber.

Fig. 6B is a top view of the flip-chip system shown in Fig. 6A.

Fig. 6C is a side view of the flip-chip system shown in Fig. 6A.

Fig. 6D is an enlarged detail view of the inlet port shown in Fig. 6A.

Fig. 6E is a side view showing a flip-chip system having multiple flip-chips.--

Please replace the paragraph starting on page 16, line 24 beginning with the word "One" and ending on page 17, line 11 with the following:

-- One field-shaping protocol is as follows:

Negative Bias	Positive Bias	Current	Bias Time
Counter Electrode 26	1st Collection Electrode 20	75	30 sec.
Focusing Electrode 26 (-0.2) 1st Collection Electrode 20	1st Transport Electrode 30	25	90 sec.
Focusing Electrode 26 (-0.2) 1st Transport Electrode 30	2nd Transport Electrode 32	5	180 sec.

Focusing Electrode 26 (-0.2) 1st Transport Electrode 30 2nd Transport Electrode 32	3rd Transport Electrode 34	3	420 sec.
Focusing Electrode 26 (-0.2) 2nd Transport Electrode 32 3rd Transport Electrode 34	Row 3	1.5 (500n/pad)	120 sec.
Focusing Electrode 26 (-0.2) 2nd Transport Electrode 32 3rd Transport Electrode 34	Row 2	1.5 (500n/pad)	120 sec.
Focusing Electrode 26 (-0.2) 2nd Transport Electrode 32 3rd Transport Electrode 34--	Row 1	1.5 (500n/pad)	120 sec.

C3 Cont'd

Please replace the paragraph beginning on page 18, line 15 with the following:

C4

--Figs. 5A, 5B and 5C show perspective views of the bottom and top and via 108 in top view, respectively, of a flip-chip system. A device 80 includes a support substrate 82 having a first surface 84 and a second surface 86, which may be of materials suitable for the function of support and conduction, such as flex circuitry, printed circuit board or semiconductive material. Contacts 88 lead to traces 90, which lead to the second substrate 92. Contacts, such as bump contacts, e.g., solder bumps, indium solder bumps, conductive polymers, silver filled epoxy, provide electrical contact between traces 90 and the chip or substrate 92. A sealant is disposed between the second surface 86 of the

support substrate 82 and the first surface 94 of the second substrate 92. An inlet port 100 may be in conductive relation to a sample chamber 102, which yet further leads to the assay chamber 104, and on to the outlet port 106. Fig. 5C shows a perspective view of the support 82 and the via 108 formed through it. The second substrate 92 is shown in dashed lines, which is disposed below the substrate 82 in the view of Fig. 5C.--

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